SEQUENCE LISTING

- <110> COHEN, STEPHEN BOUWMEESTER, ANTONIUS ROYET, JULIEN
- <120> REGULATOR OF NOTCH SIGNALING ACTIVITY
- <130> 55880 (71745)
- <140> 09/830,980
- <141> 2001-05-02
- <150> PCT/IB99/01891
- <151> 1999-11-03
- <150> GB 9824045.0
- <151> 1998-11-03
- <160> 16
- <170> PatentIn Ver. 2.1
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- Pro Ala Gly Ile Thr Thr Gln Gln Leu Gly Leu Ile Cys Asn Ala Leu 35 40 45
- Leu Lys Asn Glu Glu Ala Thr Pro Tyr Leu Phe Phe Val Gly Glu Asp 50 55 60
- Glu Ile Lys Lys Ser Leu Glu Asp Thr Leu Asp Leu Ala Ser Val Asp 65 70 75 80
- Thr Glu Asn Val Ile Asp Ile Val Tyr Gln Pro Gln Ala Val Phe Lys
 85 90 95
- Val Arg Pro Val Thr Arg Cys Thr Ser Ser Met Pro Gly His Ala Glu 100 105 110
- Ala Val Val Ser Leu Asn Phe Ser Pro Asp Gly Ala His Leu Ala Ser 115 120 125
- Gly Ser Gly Asp Thr Thr Val Arg Leu Trp Asp Leu Asn Thr Glu Thr 130 135 140

Pro His Phe Thr Cys Thr Gly His Lys Gln Trp Val Leu Cys Val Ser 145 150 155 160

Trp Ala Pro Asp Gly Lys Arg Leu Ala Ser Gly Cys Lys Ala Gly Ser 165 170 175

Ile Ile Ile Trp Asp Pro Glu Thr Gly Gln Gln Lys Gly Arg Pro Leu 180 185 190

Ser Gly His Lys Lys His Ile Asn Cys Leu Ala Trp Glu Pro Tyr His 195 200 205

Arg Asp Pro Glu Cys Arg Lys Leu Ala Ser Ala Ser Gly Asp Gly Asp 210 215 220

Cys Arg Ile Trp Asp Val Lys Leu Gly Gln Cys Leu Met Asn Ile Ala 225 230 235 240

Gly His Thr Asn Ala Val Thr Ala Val Arg Trp Gly Gly Ala Gly Leu 245 250 255

Ile Tyr Thr Ser Ser Lys Asp Arg Thr Val Lys Met Trp Arg Ala Ala 260 265 270

Asp Gly Ile Leu Cys Arg Thr Phe Ser Gly His Ala His Trp Val Asn 275 280 285

Asn Ile Ala Leu Ser Thr Asp Tyr Val Leu Arg Thr Gly Pro Phe His 290 295 300

Pro Val Lys Asp Arg Ser Lys Ser His Leu Ser Leu Ser Thr Glu Glu 305 310 315 320

Leu Gln Glu Ser Ala Leu Lys Arg Tyr Gln Ala Val Cys Pro Asp Glu 325 330 335

Val Glu Ser Leu Val Ser Cys Ser Asp Asp Asn Thr Leu Tyr Leu Trp 340 345 350

Arg Asn Asn Gln Asn Lys Cys Val Glu Arg Met Thr Gly His Gln Asn 355 360 365

Val Val Asn Asp Val Lys Tyr Ser Pro Asp Val Lys Leu Ile Ala Ser 370 375 380

Ala Ser Phe Asp Lys Ser Val Arg Leu Trp Arg Ala Ser Asp Gly Gln 385 390 395 400

Tyr Met Ala Thr Phe Arg Gly His Val Gln Ala Val Tyr Thr Val Ala 405 410 415

Trp Ser Ala Asp Ser Arg Leu Ile Val Ser Gly Ser Lys Asp Ser Thr
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Leu Lys Val Trp Ser Val Gln Thr Lys Lys Leu Ala Gln Glu Leu Pro 435 440 445

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        35
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Leu Arg Val Pro Gly Ala Ile Ser Glu Lys Gln Leu Glu Glu Leu Leu 50 55 60

Asn Gln Leu Asn Gly Thr Ser Asp Asp Pro Val Pro Tyr Thr Phe Ser 65 70 75 80

Cys Thr Ile Gln Gly Lys Lys Ala Ser Asp Pro Val Lys Thr Ile Asp 85 90 95

Ile Thr Asp Asn Leu Tyr Ser Ser Leu Ile Lys Pro Gly Tyr Asn Ser 100 105 110

Thr Glu Asp Gln Ile Thr Leu Leu Tyr Thr Pro Arg Ala Val Phe Lys 115 120 125

Val Lys Pro Val Thr Arg Ser Ser Ser Ala Ile Ala Gly His Gly Ser 130 135 140

Thr Ile Leu Cys Ser Ala Phe Ala Pro His Thr Ser Ser Arg Met Val 145 150 155 160

Thr Gly Ala Gly Asp Asn Thr Ala Arg Ile Trp Asp Cys Asp Thr Gln 165 170 175

Thr Pro Met His Thr Leu Lys Gly His Tyr Asn Trp Val Leu Cys Val 180 185 190

Ser Trp Ser Pro Asp Gly Glu Val Ile Ala Thr Gly Ser Met Asp Asn 195 200 205

Thr Ile Arg Leu Trp Asp Pro Lys Ser Gly Gln Cys Leu Gly Asp Ala 210 215 220

Leu Arg Gly His Ser Lys Trp Ile Thr Ser Leu Ser Trp Glu Pro Ile 225 230 235 240

Leu Val Lys Pro Gly Ser Lys Pro Arg Leu Ala Ser Ser Ser Lys Asp 245 250 255

Gly Thr Ile Lys Ile Trp Asp Thr Val Ser Arg Val Cys Gln Tyr Thr 260 265 270

Met Ser Gly His Thr Asn Ser Val Ser Cys Val Lys Trp Gly Gly Gln 275 280 285

Gly Leu Leu Tyr Ser Gly Ser His Asp Arg Thr Val Arg Val Trp Asp 290 295 300

Ile Asn Ser Gln Gly Arg Cys Ile Asn Ile Leu Lys Ser His Ala His 305 310 315 320

Trp Val Asn His Leu Ser Leu Ser Thr Asp Tyr Ala Leu Arg Ile Gly 325 330 335

Ala Phe Asp His Thr Gly Lys Lys Pro Ser Thr Pro Glu Glu Ala Gln 340 345 350

Lys Lys Ala Leu Glu Asn Tyr Glu Lys Ile Cys Lys Lys Asn Gly Asn 355 360 365

Ser Glu Glu Met Met Val Thr Ala Ser Asp Asp Tyr Thr Met Phe Leu 370 375 380

Trp Asn Pro Leu Lys Ser Thr Lys Pro Ile Ala Arg Met Thr Gly His 385 390 395 400

Gln Lys Leu Val Asn His Val Ala Phe Ser Pro Asp Gly Arg Tyr Ile 405 410 415

Val Ser Ala Ser Phe Asp Asn Ser Ile Lys Leu Trp Asp Gly Arg Asp 420 425 430

Gly Lys Phe Ile Ser Thr Phe Arg Gly His Ile Ala Ser Val Tyr Gln 435 440 445

Val Ala Trp Ser Ser Asp Cys Arg Leu Leu Val Ser Cys Ser Lys Asp 450 455 460

Thr Thr Leu Lys Val Trp Asp Val Arg Thr Arg Lys Leu Ser Val Asp 465 470 475 480

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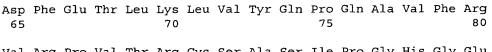
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Ser Gly Ala Glu Ile Val Asp Ser Ile Arg Lys Ser Leu Glu Glu Ile
50 55 60



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Pro Val Ile Ser Ala Gln Phe Ser Pro Asp Gly Arg Gly Leu Ala Ser 100 105 110

Gly Ser Gly Asp Gln Thr Met Arg Ile Trp Asp Ile Glu Leu Glu Leu 115 120 125

Pro Leu His Thr Cys Lys Ser His Lys Ser Trp Val Leu Cys Ile Ala 130 135 140

Trp Ser Pro Asp Ala Thr Lys Ile Ala Ser Ala Cys Lys Asn Gly Glu 145 150 155 160

Ile Cys Ile Trp Asn Ala Lys Thr Gly Glu Gln Ile Gly Lys Thr Leu 165 170 175

Lys Arg His Lys Gln Trp Ile Xaa Xaa Leu Ala Trp Gln Pro Thr Val 180 185 190

Lys Met Trp Arg Ala Asp Asp Gly Val Met Cys Arg Asn Met Thr Gly 195 200 205

His Ala His Trp Ile Asn Thr Leu Ala Leu Asn Thr Asp Tyr Ala Leu 210 215 220

Arg Thr Ser Cys Phe Glu Pro Ser Lys Ile Asn Arg Met Thr Gly His 225 230 235 240

Met Gln Leu Val Asn Gln Val Val Phe Ser Pro Asp Thr Arg Tyr Ala 245 250 255

Ser Ala Ser Phe Asp Lys Ser Val Lys Leu Trp Cys Gly Arg Thr Gly 260 265 270

Lys Tyr Leu Ala Ser Phe Arg Gly His Val Gly Pro Val Tyr Gln Val 275 280 285

Ala Trp Ser Ala Asp Ser Arg Leu Leu Val Ser Gly Ser Ala Asp Ser 290 295 300

Thr Leu Lys Val Phe Glu Leu Lys Thr Lys Ser Leu Tyr Tyr Asp Leu 305 310 315 320

Pro Gly His Gly Asp Glu Val Phe Thr Val Asp Trp Ser Pro Glu Gly 325 330 335

Thr Lys Val Val Ser Gly Gly Lys Asp Lys Val Leu Lys Leu Trp 340 345 350

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Glu Glu Pro Leu Pro Leu Ala Phe Tyr Val His Asp Ala Glu Ile Val
Ser Ser Leu Gly Lys Thr Leu Glu Ser Gln Ser Val Glu Thr Glu Lys
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Val Thr Arg Cys Thr Ser Ser
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Phe Phe Val His Asp Ala Glu Ile Val Ser Ser Leu Gly Lys Thr Leu
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Gln Xaa Leu Phe Arg Val Arg Ala Val Thr Arg Cys Thr Ser
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<212> PRT

<213> Xenopus laevis

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20 25 30

Asp Lys Leu Gln Leu Val Cys Asn Ala Leu Leu Gln Glu Glu Asp Pro 35 40 45

Val Pro Leu Ala Phe Phe Val Gln Asp Leu Glu Ile Val Thr Ser Leu
50 55 60

Asp Lys Thr Leu Glu Lys Gln Ser Val Glu Thr Glu Lys Val Ile Asp 65 70 75 80

Ile Ile Tyr Gln Pro Gln Ala Val Phe Lys Val Arg Ala Val Thr Arg 85 90 95

Cys Thr Ser Ser Leu Glu Gly His Thr Glu Ala Val Ile Ser Val Ala 100 105 110

Phe Ser Pro Thr Gly Lys Tyr Leu Ala Ser Gly Ser Gly Asp Thr Thr 115 120 125

Val Arg Phe Trp Asp Leu Ser Thr Glu Thr Pro His Phe Thr Ser Lys 130 135 140

Gly His Thr His Trp Val Leu Ser Ile Ala Trp Ser Pro Asp Gly Lys 145 150 155 160

Lys Leu Ala Ser Gly Cys Lys Asn Ser Gln Ile Phe Ile Trp Asp Pro \$165\$ \$170\$ \$175\$

Ser Thr Gly Lys Gln Ile Gly Lys Pro Leu Thr Gly His Ser Lys Trp 180 185 190

Ile Thr Trp Leu Cys Trp Glu Pro Leu His Leu Asn Pro Glu Ser Arg 195 200 205

Tyr Leu Ala Ser Ala Ser Lys Asp Cys Thr Ile Arg Ile Trp Asp Thr 210 215 220

Val Met Gly Gln Cys Gln Lys Ile Leu Thr Ser His Thr Gln Ser Val 225 230 235 240

Thr Ala Val Lys Trp Gly Gly Asp Gly Leu Leu Tyr Ser Ser Gln 245 250 255

Asp Arg Thr Ile Lys Ala Trp Arg Ala Gln Asp Gly Val Leu Cys Arg 260 265 270

Thr Leu Gln Gly His Ala His Trp Val Asn Thr Met Ala Leu Ser Thr 275 280 285

Asp Tyr Val Leu Arg Lys Gly Ala Phe Asn Pro Ala Asp Ala Ser Val 290 295 300

Asn Pro Gln Asp Met Ser Gly Ser Leu Glu Val Leu Lys Glu Lys Ala 305 310 315 320

Leu Lys Arg Ser Asn Glu Val Arg Gly Gln Gly Pro Glu Arg Leu Val \$325\$ 330 335

Ser Gly Ser Glu Asp Phe Thr Leu Phe Leu Trp Ala Pro Ala Glu Glu 340 345 350

Lys Lys Pro Leu Gln Arg Met Thr Gly His Gln Ala Leu Ile Asn Glu 355 360 365

Val Leu Phe Ser Pro Asp Thr Arg Ile Ile Ala Ser Ala Ser Phe Asp 370 375 380

Lys Ser Ile Lys Leu Trp Asp Gly Lys Thr Gly Lys Phe Leu Thr Ser 385 390 395 400

Leu Arg Gly His Val Ser Ala Val Tyr Gln Ile Ala Trp Ser Ala Asp 405 410 415

Ser Arg Leu Leu Val Ser Gly Ser Ser Asp Ser Thr Leu Lys Val Trp 420 425 430

Asp Ser Lys Thr Lys Lys Leu Leu Ile Asp Leu Pro Gly His Ala Asp 435 440 445

Glu Val Tyr Ser Val Asp Trp Ser Pro Asp Gly Gln Arg Val Ala Ser 450 455 460

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<212> PRT

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<211> 149

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gccacgccac atacgataca ggcgcgcca
<210> 10
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<211> 32
<212> DNA
<213> Artificial Sequence
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32

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Pro Phe Asp Val Pro Val Asp Ile
 1
                  5
<210> 14
<211> 7
<212> PRT
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      peptide
<400> 14
Asp Ile Ile Tyr Gln Pro Gln
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